

**AMENDMENTS TO THE SPECIFICATION:**

*Please set forth the title of the application to read as follows consistent with the title provided on the application:*

--BIOCATALYST FOR PRODUCTION OF D-LACTIC ACID--.

*Please amend the paragraph at page 31, line 16, as follows:*

When lactic acid is produced by culturing the microorganism obtained in the present invention, aeration may be carried out to obtain more preferable results though aeration may not be necessary at all. The aeration conditions herein do not always require the air to pass through the culture solution, but also include surface aeration depending on the shape of the fermentor, wherein an air layer above the culture solution is ventilated while the culture solution is stirred moderately, and refer to flowing a gas containing oxygen into the fermentor. In the case of aeration into the solution, since dissolved oxygen concentration changes according to combinations of internal pressure, stirring blade location, stirring blade shape and stirring speed, optimal conditions can be found as follows by using lactic acid productivity, amount of organic acids other than lactic acid or the like as an index. For example, in the case of culturing Escherichia coli MT-10934 strain with a relatively small fermentor such as BMJ-01, a culture apparatus manufactured by ABLE Corporation, preferable results can be obtained under aeration conditions which can be achieved with the aeration rate of 0.01 vvm to 1 vvm and the stirring speed of 50 rpm to 500 rpm at normal pressure, more preferably, the aeration rate of 0.1 vvm to 0.5 vvm and the stirring speed of 100 rpm to 400 rpm at normal pressure when 500 g of the culture solution is used. This aerobic condition is a condition which enables supply of oxygen satisfying a requirement of an oxygen-transfer

coefficient  $K_La$  of not less than  $1\text{ h}^{-1}$  or not more than  $400\text{ h}^{-1}$  at normal pressure using water at a temperature of  $30^\circ\text{C}$ .

*Please amend Table 3 on page 37, as follows:*

Table 3

Amount of D-lactic acid accumulated	94 g/kg of culture solution
Recovered amount of culture solution	570 g
Weight of dry microbial mass	2.0 g
Optical purity of D-lactic acid	99.9%ee or more
Amount of D-lactic acid accumulated after 50 hrs of culture initiation	65.2 [[g/g]] <u>g/kg</u>

*Please amend the paragraph at page 38, line 20, as follows:*

The genome DNA of the Escherichia coli MG1655 strain was prepared by the method described in Current Protocols in Molecular Biology (John Wiley & Sons). Using combinations of 1  $\mu\text{g}$  of the obtained genome DNA with the primer having the base sequence of Sequence No. 5 and the primer having the base sequence of Sequence No. 6, and with the primer having the base sequence of Sequence No. 7 and the primer having the base sequence of Sequence No. 8, PCR was performed under usual conditions using 100 pmol each of the above-mentioned primer DNAs to amplify DNA fragments of about 1.8 [[kb]] kbp (hereinafter, may be called a pflB-L fragment) and about 1.3 [[kp]] kbp (hereinafter, may be called a pflB-R fragment). These DNA fragments were isolated by agarose electrophoresis, recovered, and the pflB-L fragment was digested with HindIII and SphI, and the pflB-R fragment was

digested with SphI and PstI, respectively. These two kinds of digested fragments and a digest of temperature-sensitive plasmid pTH18cs1 (GenBank accession number: AB019610) (Hashimoto-Gotoh, T., et.al., Gene, Vol. 241(1), pp185-191 (2000)) with HindIII and PstI were reacted with T4 DNA ligase, and then the product was transformed to an Escherichia coli DH5 $\alpha$  competent cell (TAKARA BIO INC.), to give a plasmid containing two fragments, i.e., a 5'-upstream adjacent fragment and a 3'-downstream adjacent fragment of a gene encoding pflB, which was designated as pTH $\Delta$ pfl.

*Please amend the paragraph at page 52, line 9, as follows:*

Next, the above-mentioned clone was applied onto an LB agar plate, and cultured overnight at 30°C, and then inoculated into an LB liquid medium (3 ml/test tube), and cultured with shaking at 42°C for 3 to 4 hours. This was suitably diluted (about 10<sup>-2</sup> to 10<sup>-6</sup>) to obtain single colonies, and the diluted solution was applied onto an LB agar plate and cultured overnight at 42°C to give colonies. From the grown colonies, 100 colonies were picked up randomly, and each of them was grown on an LB agar plate and an LB agar plate containing 10  $\mu$ g/ml of chloramphenicol. Chloramphenicol-sensitive clones which grow only on an LB agar plate were selected from them. Furthermore, a fragment of about 2.0 [[kb]] kbp containing dld was amplified by PCR using the chromosome DNA of these desired clones, and a strain was selected in which a dld gene region was deleted. The clone which satisfies the above description was chosen as a dld-deleted strain, and the obtained strain was designated as MG1655 $\Delta$ dld strain.

*Please replace the Abstract with the following new Abstract:*